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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/742,625	12/20/2000	Frank Bor-Her Chen	25164-67462	9358

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EXAMINER	
CLEVELAND, MICHAEL B	
ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/742,625	CHEN ET AL.	
	Examiner	Art Unit	
	Michael Cleveland	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 37-40 and 42 are rejected under 35 U.S.C. 102(b) as being anticipated by van der Hoeven (U.S. Patent 4,789,604, hereafter '604).

Claims 37, 40: '604 teaches forming a crosslinkable polymer coating on paper (a compressible mat), crosslinking it at room temperature (i.e., without heating) (col. 9, lines 43-62) and

compressing and heating the crosslinked coating and the mat to form the polymer coated substrate (col. 9, line 63-col. 10, line 4).

The composition is crosslinked at station 4 at the same time (i.e., concomitant) as it is applied at station 11.

Claims 38-39: The substrate for the coating may be a wood panel, or a wood panel with paper attached to it (col. 6, lines 25-54). (In such embodiment, the polymerizable coating is placed on the paper (col. 6, lines 30-32). Adjacent layers may be attached by glue (col. 3, line 50-col. 4, line 5).

Claim 42: There is no indication that ions are present in the radiation-crosslinkable compositions. Therefore, they appear to be covalently cross-linked.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 37-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over van der Hoeven '604 in view of Helmer et al. (WO 96/22338, hereafter '338).

'604 teaches the use of crosslinking acrylate polymers (col. 5, lines 1-62) to provide decorative coatings. It does not explicitly teach the use of ionically crosslinked polymers.

'338 teaches the formation of a quick drying paint (i.e., a decorative coating) comprising crosslinking acrylate polymers (pp. 3, 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used these polymers in place of those of '604 in order to have achieved faster curing with a reasonable expectation of success because they are decorative crosslinkable acrylate polymers disclosed as having the advantage of hardening quickly. Applicant states that these polymers are ionically crosslinked, thermosetting polymers, and that they crosslink as they are being applied (i.e., concommitant with application).

5. Claims 41 and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over van der Hoeven '604 in view of Kunz (U.S. Patent 5,157,073, hereafter '073).

'604 teaches the use of crosslinking acrylate polymers (col. 5, lines 1-62) to provide scratch-resistant coatings. It does not explicitly teach the use of thermoset, ionically crosslinked polymers.

'073 teaches the use of thermosetting, ionically-crosslinked acrylic polymers (col. 1, lines 9-66) to provide hard, protective coatings (col. 3, lines 1-10).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the thermoset, ionically-crosslinked polymers of '073 as the particular polymers of '604 with a reasonable expectation of success and with the expectation of similar results because '073 teaches that its polymers may be used to produce decorative, hard (i.e., scratch-resistant) coatings.

Response to Arguments

6. The rejections under 35 U.S.C. 102(b) as being anticipated by Bailey '967, Fertell '951, Dyksterhouse '105 are withdrawn in view of Applicant's amendment because the polymer is cross-linked before application. The rejections under 35 USC 102 regarding Potts '522 and Matejka '228 are withdrawn in view of Applicant's amendment because the polymer is cross-linked because the references do not explicitly indicate that the polymer is cross-linked

concomitant with application. The rejections under 35 USC 103 based on Matejka '228 are withdrawn for the same reasons given for the withdrawal of the rejections under 35 USC 102.

7. Applicant's arguments filed 12/22/2003 have been fully considered but they are not persuasive.

Applicant argues that van der Hoeven does not show concomitant application and cross-linking because it teaches "crosslinking a composition **after** it has been applied to the surface of the paper as clearly shown in Fig. 1." (emphasis by Applicant). The Examiner disagrees with the characterization. The Examiner acknowledges that Fig. 1 shows that the composition is cross-linked **downstream** of the application point, but it also shows that the composition is applied at station 11 at the same time (i.e., concomitant) that it is cured at station 4.

Applicant argues that van der Hoeven does not teach that faster curing resins are desirable. The argument is unconvincing because the advantage of faster curing is not taught by van der Hoeven. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The advantage of faster curing is taught by '338. Faster curing is well recognized in the art of curing resins to create greater productivity. (See the references cited below, particularly Motter).

Applicant argues that there is no motivation to substitute the polymers of '338 for those of '604. The argument is unconvincing because the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. van der Hoeven teaches the use of decorative crosslinking acrylate polymers. '338 indicates that its polymers are suitable decorative crosslinking acrylate polymers. Thus, their suitability for the purpose of '604 renders their use obvious. Furthermore, '338 teaches the advantage that its polymer cures quickly.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that there is no motivation to substitute the polymers of '073 for those of '604. The argument is unconvincing because the selection of something based on its known suitability for its intended use has been held to support a *prima facie* case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See MPEP 2144.07. van der Hoeven teaches the use of hard, protective crosslinking acrylate polymers. '073 indicates that its polymers are hard, protective crosslinking acrylate polymers. Thus, their suitability for the purpose of '604 renders their use obvious.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Motter et al. (U.S. Patent 5,635,583, col. 2, lines 31-40), Moschovis et al. (U.S. Patent 4,782,129, col. 6, lines 10-25), Traver et al. (U.S. Patent 4,190,688, col. 2, lines 1-9), and Josten et al. (U.S. Patent 4,125,497, col. 2, lines 3-13) are cited as evidence that faster curing resins are recognized in the art of curing resins as advantageous.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (703) 308-2331. The examiner can normally be reached on 8-5:30 M-F, with alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-3186 for regular communications and (703) 306-3186 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Michael Cleveland

Patent Examiner

March 7, 2004